

TRC Recalculations and Explanation

Before the Public Utilities Commission of the State of California

Order Instituting Rulemaking to Examine the Commission's Future Energy Efficiency Policies, Administration, and Programs.	R.01-08-028 Filed August 23, 2001
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TRC Recalculations for the LiteVend Program as Adjusted by the Draft Decision for Local Energy Efficiency Programs, R. 01-08-028

by

Ecos Consulting, Inc.

Dated May 1, 2002
Submitted by:
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Certificate of Service

I, the undersigned, state that I am a citizen of the United States and am employed in the City of Portland, Oregon and County of Multnomah; that I am over the age of eighteen years; and that my business address is Ecos Consulting, Inc., 208 SW Stark, Suite 400, Portland, OR 97204. I also state that I am a Vice President of Ecos Consulting.

On the 1st day of May 2002, I served a signed original copy and five additional copies of a document entitled: "TRC Recalculations for the ENERGY STAR® CFL Program for Small Hardware and Grocery Retailers as Adjusted by the Draft Decision for Energy Efficiency Programs, R. 01-08-028" via Federal Express to the Docket Office with a copy to ALJ Thomas and Commissioner Lynch and via electronic mail to those same parties and all other parties on the service list for this proceeding.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on this 1st day of May 2002.

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cc: Assigned Commissioner Loretta Lynch
The CPUC Docket Office
All parties of record R. 01-08-028

Introduction

In the Draft Decision for the Energy Efficiency Program Selection per R.01-08-028, Ecos Consulting was awarded a portion of the proposed program “LiteVend” to promote energy-efficient beverage vending machines. The selected program encompasses the utility service territory of San Diego Gas and Electric (SDG&E). This adjustment to the Program (reduction of territory covered by the Program) reduced the administration budget while leaving energy savings targets unchanged.

In its comments to the Commission dated April 22, 2002, Ecos Consulting respectfully requested reconsideration of the modifications to ensure a successful and effective program. Specifically, Ecos suggested either a decrease in the energy savings targets to reflect the significant decrease in administration costs or a revised budget to better enable Ecos to achieve the targeted energy savings levels. In a phone conversation with Commission representatives on April 23, 2002, Ecos was encouraged to present these alternate scenarios to the Commission. Thus, this document presents program budgets, savings targets, and TRC calculations for three scenarios, listed in order of effectiveness.

First Scenario (Recommended)– Proposed Budget, No Savings Target Change: In this scenario, we calculate the ratios for the SDG&E service territory based on our original proposal to the CPUC. This proposed budget addressed all aspects of the beverage vending machines markets – new, refurbished, and existing/installed machines. As we noted in our earlier comments to the CPUC, the originally proposed marketing and ME&V costs for this service territory benefited from the sharing of costs across all territories. Since this Program is now a stand-alone program, it is important that the marketing and ME&V portions have sufficient budget to account for the loss of economies of scale from the originally proposed program. For this scenario, the TRC ratio is 3.53, and the Participant Test ratio is 77.98.

Second Scenario – Awarded Budget, Savings Target Change: In this scenario, we established a savings target proportional to the reduction in the original proposed budget (27%), and attempted to preserve all the components of the original proposed program, including the addressing of energy efficiency in all aspects of the beverage vending machines markets – new, refurbished, and existing/installed machines. Incentives were provided in all three market-segments in this scenario. For this scenario, the TRC ratio is 4.15. The Participant Test ratio did not work for this scenario as it produced a negative number.

Third Scenario – Awarded Budget, No Savings Target Change: Our final scenario uses the awarded budget and no change in the savings target. To meet the stated savings target with the awarded budget, we chose to implement a very limited program, using the most energy-efficient option, focusing only on the new beverage vending machines market. In this scenario, incentives are provided only for new beverage vending machine models. In this scenario, the TRC test yielded a Benefit Ratio of 5.6. The Participant Test ratio did not work for this scenario as it produced a negative number.

As indicated by the TRC calculations, all three scenarios are cost-effective in their design. Ecos, however, recommends the first scenario for adoption by the Commission. This scenario – proposed budget and current savings targets – provides sufficient program resources to ensure that the Commission will achieve its desired level of energy savings while ensuring program costs are contained.

A spreadsheet with the TRC calculations accompanies this document. Below is an explanation of the numerical data provided by Ecos for these tests.

Explanation of Numerical Data

1. Program Benefits Calculations

Number of Units

To determine the appropriate number of units for this Program, Ecos conducted research among a variety of vending machine manufacturers. This research included data on the number of machines installed, number of machines refurbished each year and number of new machines sold. Ecos took this market research and estimated, using conservative methodology, the number of units for this Program.

Annual kWh Savings per Unit

To calculate the kWh savings, Ecos gathered information from the manufacturer of the Econo-Cool technology, Royal Vendors. We worked with Royal Vendors to determine the most appropriate measures to use for this input.

Effective Useful Life (EUL)

In the *Energy Efficiency Policy Manual* (Attachment 1 to the *Interim Decision Adopting Energy Efficiency Policy Rules*) the CPUC directed all bidders to use the Effective Useful Lives (EUL) of Energy Efficiency Measures provided in the documentation for those measures listed. Vending machines were not listed on the list so Ecos made the following assumptions:

New Machines – 12 years. According to industry and research sources, vending machines typically last 12 to 15 years.¹ We chose to use the shorter length, as machines may be changing more rapidly in the near future as manufacturers respond to new container shapes and sizes.

New “Econo-Cool” – 12 years. Using the same rationale as above, we believe that an “Econo-Cool” equipped machine will have a similar length of service.

“Econo-Cool” retrofit – 5 years. According to the same industry sources, vending machines generally undergo a refurbishment process every three to five years.² In this case, the longer service life applies, as the energy-efficient components have proven to last longer. While the retrofitted components may last longer, after 5 years of service, a retrofitted machine will have about 8 to 10 years of service, and may be destined for retirement.

Vending Miser retrofit – 5 years. According to the Commissions’ guidelines, plug load sensors have a 10-year EUL.³ However, since machines undergo refurbishment every three to five years, the integrity or settings for the Vending Miser unit may be lost once the machine connected to it is removed (Vending Miser unit itself may be damaged, or settings defeated).

Net-to-Gross Ratio

In the *Energy Efficiency Policy Manual* (Attachment 1 to the *Interim Decision Adopting Energy Efficiency Policy Rules*) the CPUC directed all bidders to use the Net-to-Gross Ratio (NTGR) for applicable programs provided in the documentation for those measures listed. For those

¹ E-Source Tech Update, May 1996, p. 3. Confirmed by Royal Vendors’ VP of Engineering, December 2001.

² Ibid.

³ Energy Efficiency Manual, Attachment 1. Prepared by the CPUC Energy Division. Draft Version 1, Nov. 2001.

not listed, the CPUC requested that applicants use the default NTGR of 0.8. The LiteVend Program did not fit into the provided measures; therefore, Ecos chose to use the default data of 0.8.

2. Non-Administrator Costs Calculations

Total Rebate/Financial Incentive per Unit

The Financial Incentive per Unit for the LiteVend program varies for the different technologies in the Program. For the Econo-Cool technology, Ecos used an incentive equivalent to the incremental cost of the new technology (there is no installation cost for this technology as it is added at the factory). Based on our experience, using an incentive equal to the cost of the new technology is important to encourage. Ecos anticipates the possibility of reducing the incentive for the Econo-Cool technology in the second year of the program. For the Vending Miser™ technology, the incentive covers the cost of the installation of the technology.

Gross Incremental Measure Cost per Unit

The Gross Incremental Measure Cost per Unit values used in Ecos' calculations was provided by Royal Vendors and Bayview Technologies (information available at www.bayviewtech.com for 1,000+ units).